Access DB# 75958

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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Lynda Guo Examiner # : 79756 Date: 09/17/02
Art Unit: 1627 Phone Number ~~30~~ 605-1200 Serial Number: 09/896,983
Mail Box and Bldg/Room Location: CM1-3B19 Results Format Preferred (circle): (PAPER) DISK E-MAIL
office - 3D08

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method for determining alkaline phosphatase

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

****

STAFF USE ONLY

Searcher: Point of Contact: Thomas G. Larson, PH.D.
Searcher Phone #: 703-308-7309
Searcher Location: CM1, Rm. 6 B 01
Date Searcher Picked Up: 9/20
Date Completed: 9/27/02
Searcher Prep & Review Time: 30
Clerical Prep Time: _____
Online Time: 289

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic X
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN 4391
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

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=> d que l38
L34          139 SEA FILE=BIOSIS ABB=ON  PLU=ON  9001-78-9# AND 330-13-2#
L37        25086 SEA FILE=BIOSIS ABB=ON  PLU=ON  BLOOD/CT
L38            0 SEA FILE=BIOSIS ABB=ON  PLU=ON  L37 AND L34


=> d que l40
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L39           10 SEA FILE=BIOSIS ABB=ON  PLU=ON  NITROPHENYL PHOSPHATE/TI AND
                 ALKALINE PHOSPHATASE/TI
L40            6 SEA FILE=BIOSIS ABB=ON  PLU=ON  L34 AND L39


=> file biotechno
FILE 'BIOTECHNO' ENTERED AT 16:58:20 ON 26 SEP 2002
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FILE LAST UPDATED: 24 SEP 2002      <20020924/UP>
FILE COVERS 1980 TO DATE.

>>>  SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN
     /CT AND BASIC INDEX  <<<

=> d que l47
L41           36 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  9001-78-9# AND 330-13-2#
L42       304217 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  BLOOD OR PLASMA OR SERUM
L43            8 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  L41 AND L42
L46         1549 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  ALKALINE PHOSPHATASE/TI
L47            3 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  L46 AND L43


=> d que l49
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L42       304217 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  BLOOD OR PLASMA OR SERUM
L43            8 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  L41 AND L42
L48         6848 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  SPECTROPHOTOM?
L49            2 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  L43 AND L48


=> d que l52
L46         1549 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  ALKALINE PHOSPHATASE/TI
L52            2 SEA FILE=BIOTECHNO ABB=ON  PLU=ON  L46 AND NITROPHENYL
                 PHOSPHATE/TI


=> s l47 or l49 or l52
L55            6 L47 OR L49 OR L52

=> file medline
FILE 'MEDLINE' ENTERED AT 13:26:23 ON 27 SEP 2002

 FILE LAST UPDATED: 26 SEP 2002 (20020926/UP). FILE COVERS 1958 TO DATE.

 On June 9, 2002, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2002 vocabulary.  Enter HELP THESAURUS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
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SUBSTANCE IDENTIFICATION.

Medline is not very good about including CAS registry numbers in their indexing

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=> d que l58
L56         1579 SEA FILE=MEDLINE ABB=ON  PLU=ON  9001-78-9#
L57          288 SEA FILE=MEDLINE ABB=ON  PLU=ON  330-13-2#
L58            0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L56 AND L57

=> d que l67
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L57          288 SEA FILE=MEDLINE ABB=ON  PLU=ON  330-13-2#
L59        34205 SEA FILE=MEDLINE ABB=ON  PLU=ON  ALKALINE PHOSPHATASE+PFT/CT
L60        35784 SEA FILE=MEDLINE ABB=ON  PLU=ON  L56 OR L59
L61        11386 SEA FILE=MEDLINE ABB=ON  PLU=ON  NITROPHENOLS+PFT/CT
L62        66050 SEA FILE=MEDLINE ABB=ON  PLU=ON  ORGANOPHOSPHORUS COMPOUNDS+PFT
                 /CT
L63          623 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61 AND L62
L64         1522 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63 OR L57 OR ((4 OR P) (W)
                 NITROPHENYL (W) PHOSPHATE)
L65          251 SEA FILE=MEDLINE ABB=ON  PLU=ON  L60 AND L64
L66        66607 SEA FILE=MEDLINE ABB=ON  PLU=ON  BLOOD CHEMICAL ANALYSIS+NT,PFT
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L67            2 SEA FILE=MEDLINE ABB=ON  PLU=ON  L65 AND L66

=> d que l78
L57          288 SEA FILE=MEDLINE ABB=ON  PLU=ON  330-13-2#
L59        34205 SEA FILE=MEDLINE ABB=ON  PLU=ON  ALKALINE PHOSPHATASE+PFT/CT
L61        11386 SEA FILE=MEDLINE ABB=ON  PLU=ON  NITROPHENOLS+PFT/CT
L62        66050 SEA FILE=MEDLINE ABB=ON  PLU=ON  ORGANOPHOSPHORUS COMPOUNDS+PFT
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L63          623 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61 AND L62
L64         1522 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63 OR L57 OR ((4 OR P) (W)
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L77           35 SEA FILE=MEDLINE ABB=ON  PLU=ON  L64 AND L75
L78            5 SEA FILE=MEDLINE ABB=ON  PLU=ON  L77 AND L70

=> d que l80
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L57          288 SEA FILE=MEDLINE ABB=ON  PLU=ON  330-13-2#
L59        34205 SEA FILE=MEDLINE ABB=ON  PLU=ON  ALKALINE PHOSPHATASE+PFT/CT
L60        35784 SEA FILE=MEDLINE ABB=ON  PLU=ON  L56 OR L59
L61        11386 SEA FILE=MEDLINE ABB=ON  PLU=ON  NITROPHENOLS+PFT/CT
L62        66050 SEA FILE=MEDLINE ABB=ON  PLU=ON  ORGANOPHOSPHORUS COMPOUNDS+PFT
                 /CT
L63          623 SEA FILE=MEDLINE ABB=ON  PLU=ON  L61 AND L62
L64         1522 SEA FILE=MEDLINE ABB=ON  PLU=ON  L63 OR L57 OR ((4 OR P) (W)
                 NITROPHENYL (W) PHOSPHATE)
L65          251 SEA FILE=MEDLINE ABB=ON  PLU=ON  L60 AND L64
L79        16969 SEA FILE=MEDLINE ABB=ON  PLU=ON  HEMOLYSIS+PFT/CT
L80            2 SEA FILE=MEDLINE ABB=ON  PLU=ON  L65 AND L79

=> s l85 or l67 or l78 or l80
L81            8 S L58 OR L67 OR L78 OR L80

=> file wpids
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Searched by Thom Larson, STIC, 308-7309

No controlled term indexing or CAS Registry No. indexing available in WPIDS – search by free text.

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FILE 'WPIDS' ENTERED AT 13:27:55 ON 27 SEP 2002
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FILE LAST UPDATED: 24 SEP 2002              <20020924/UP>
MOST RECENT DERWENT UPDATE          200261   <200261/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
    enabled in WPINDEX/WPIDS and WPIX  >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

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    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

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 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

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    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d que l84
L82          77 SEA FILE=WPIDS ABB=ON  PLU=ON  ALKALINE PHOSPHATASE (5A)
                (SERUM OR BLOOD OR PLASMA)
L83          94 SEA FILE=WPIDS ABB=ON  PLU=ON  ((4 OR P) (W) NITROPHENYL (W)
                PHOSPHATE)
L84           4 SEA FILE=WPIDS ABB=ON  PLU=ON  L82 AND L83


=> d que l87
L83          94 SEA FILE=WPIDS ABB=ON  PLU=ON  ((4 OR P) (W) NITROPHENYL (W)
                PHOSPHATE)
L85        6283 SEA FILE=WPIDS ABB=ON  PLU=ON  HEMOGLOB? OR HAEMOGLOB?
L86          33 SEA FILE=WPIDS ABB=ON  PLU=ON  L85 AND ALKALINE PHOSPHATASE
L87           2 SEA FILE=WPIDS ABB=ON  PLU=ON  L86 AND L83


=> d que l90
L88       20621 SEA FILE=WPIDS ABB=ON  PLU=ON  SPECTROSCOP? OR SPECTROPHOTOM?
L89          25 SEA FILE=WPIDS ABB=ON  PLU=ON  L88 AND ALKALINE PHOSPHATASE
L90           1 SEA FILE=WPIDS ABB=ON  PLU=ON  L89 AND NITROPHENYL PHOSPHATE


=> d que l93
L91        1326 SEA FILE=WPIDS ABB=ON  PLU=ON  HEMOLYS? OR HAEMOLYS?
L92           3 SEA FILE=WPIDS ABB=ON  PLU=ON  L91 AND ALKALINE PHOSPHATASE
L93           0 SEA FILE=WPIDS ABB=ON  PLU=ON  L92 AND NITROPHENYL PHOSPHATE


=> s l84 or l87 or l90 or l93
L94           6 S L84 OR L87 OR L90 OR L93
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remove duplicate documents

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=> dup rem l81 l53 l40 l55 l54 l94
FILE 'MEDLINE' ENTERED AT 13:46:54 ON 27 SEP 2002

FILE 'CAPLUS' ENTERED AT 13:46:54 ON 27 SEP 2002
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FILE 'BIOTECHNO' ENTERED AT 13:46:54 ON 27 SEP 2002

FILE 'EMBASE' ENTERED AT 13:46:54 ON 27 SEP 2002

FILE 'WPIDS' ENTERED AT 13:46:54 ON 27 SEP 2002

PROCESSING COMPLETED FOR L81
PROCESSING COMPLETED FOR L53
PROCESSING COMPLETED FOR L40
PROCESSING COMPLETED FOR L55
PROCESSING COMPLETED FOR L54
PROCESSING COMPLETED FOR L94
L96 32 DUP REM L81 L53 L40 L55 L54 L94 (5 DUPLICATES REMOVED)

=> D IBIB ABS 1-32

L96 ANSWER 1 OF 32 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:238439 CAPLUS
DOCUMENT NUMBER: 132:247995
TITLE: Spectrophotometric method for the determination of **alkaline phosphatase** in blood serum that eliminates the interference of hemoglobin
INVENTOR(S): Weisheit, Ralph; Treiber, Wolfgang
PATENT ASSIGNEE(S): Roche Diagnostics G.m.b.H., Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19846301	A1	20000413	DE 1998-19846301	19981008
WO 2000022162	A1	20000420	WO 1999-EP7394	19991005
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9964682	A1	20000501	AU 1999-64682	19991005
EP 1119641	A1	20010801	EP 1999-952500	19991005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002527076	T2	20020827	JP 2000-576052	19991005

PRIORITY APPLN. INFO.: DE 1998-19846301 A 19981008
WO 1999-EP7394 W 19991005

AB The invention concerns the spectrophotometric detn. of alk. phosphatase in blood serum or plasma at two wavelengths thus eliminating the interference of Hb or blood substitutes. Blood substitutes are modified Hb, bovine Hb, recombinant Hb. Hb content can be up to 6500 mg/dL. The selected wavelengths are 450 nm in combination with 480 nm, 546 nm, or 575 nm. Thus 4-nitrophenylphosphate was used as substrate; absorption was measured within 4 min.

L96 ANSWER 2 OF 32 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:238438 CAPLUS
DOCUMENT NUMBER: 132:247994
TITLE: Spectrophotometric method for the determination of **alkaline phosphatase** in plasma or serum using the rate-blank method to eliminate hemoglobin interference
INVENTOR(S): Weisheit, Ralph; Treiber, Wolfgang
PATENT ASSIGNEE(S): Roche Diagnostics G.m.b.H., Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19846300	A1	20000413	DE 1998-19846300	19981008
WO 2000022161	A1	20000420	WO 1999-EP7366	19991005
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9961997	A1	20000501	AU 1999-61997	19991005
EP 1119640	A1	20010801	EP 1999-948931	19991005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002527075	T2	20020827	JP 2000-576051	19991005

PRIORITY APPLN. INFO.: DE 1998-19846300 A 19981008
WO 1999-EP7366 W 19991005

AB The invention concerns the spectrophotometric detn. of alk. phosphatase in blood plasma or serum at 450 nm and 660 nm in combination with the rate-blank method to eliminate the interference of Hb or blood substitutes. To measure the rate of the blank, absorption is measured without adding the 4-nitrophenyl phosphate substrate to the samples.

L96 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:662602 CAPLUS
DOCUMENT NUMBER: 134:14572
TITLE: Mechanism of interference of a polymerized hemoglobin blood substitute in an alkaline phosphatase method
AUTHOR(S): Chance, Jeffrey J.; Norris, Edward J.; Kroll, Martin H.
CORPORATE SOURCE: Division of Clinical Chemistry, Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD, 21287-7065, USA

SOURCE: Clinical Chemistry (Washington, D. C.) (2000), 46(9), 1331-1337
CODEN: CLCHAU; ISSN: 0009-9147
PUBLISHER: American Association for Clinical Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

of interest
4 for ref. list

AB Background: Hb-based oxygen carriers can cause profound interferences in many anal. procedures. We detd. the mechanism of interference in the assay of alk. phosphatase activity and identified approaches that might be used to correct for this interference. Methods: Interference of a polymd. Hb blood substitute with the assay of alk. phosphatase was examd. with a Hitachi 917 analyzer and UV-visible spectrophotometry. Results: Hb-based oxygen carrier solns. had substantial absorbance at 415 nm, the wavelength of anal. used to measure the formation of 4-nitrophenol. In addn. to offsetting the initial absorbance at the anal. wavelength, polymd. Hb gave rise to a strong neg. interference plot because of alkali denaturation of the substitute. The same interference mechanism was also obsd. for native Hb (hemolyzate), indicating that the interference was not derived from the polymn. process. The interference can be cor. by implementing a rate-correction procedure, or the interference can be avoided by measurement at 450 nm. Conclusions: The interference of polymd. Hb in the alk. phosphatase assay is a result of an absorbance offset caused by alkali denaturation of Hb. The interference can be cor. or avoided by modifying the calcn. or the anal. wavelength. The correction strategy may also be applicable to improving the hemolysis index for this method.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:487468 CAPLUS
DOCUMENT NUMBER: 131:127388
TITLE: Detection system using liposomes and signal modification
INVENTOR(S): Nicklin, Stephen; Clarke, David John; Lloyd, Christopher James; Aojula, Harmesh Singh; Tsilosani, Marina; Wilson, Michael Thomas
PATENT ASSIGNEE(S): The Secretary of State for Defence, UK
SOURCE: PCT Int. Appl., 111 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9938009	A1	19990729	WO 1999-GB208	19990121
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
ZA 9900325	A	19990719	ZA 1999-325	19990118
CA 2318170	AA	19990729	CA 1999-2318170	19990121
AU 9921770	A1	19990809	AU 1999-21770	19990121
AU 749955	B2	20020704		

EP 1049932 A1 20001108 EP 1999-901770 19990121
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, MC, PT, IE, FI
NO 2000003709 A 20000921 NO 2000-3709 20000719
PRIORITY APPLN. INFO.: GB 1998-1120 A 19980121
WO 1999-GB208 W 19990121

AB A process for detecting an analyte comprises (a) contacting a sample suspected of contg. said analyte with a containment means comprising a barrier which separates signal generating reagents from said sample, in the presence of an element which interacts specifically with said analyte, under conditions whereby interaction between the analyte and the said element results in activation of the signal generating reagents within the containment means on the side of the barrier opposite to the sample, and (b) detecting any signal generated and retained within the containment means from the sample side of the barrier. The process of the invention provides for sensitive detection of very small nos. of analyte materials using measurement techniques which include counting methods such as flow cytometry. TNT was detected using Tris-HCl pH 7.4, TNP-conjugated melittin as pore-forming reagent, liposomes contg. alk. phosphatase, ELF-97 substrate, and monoclonal antibodies to TNT. Fluorescent liposomes were counted.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L96 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:431645 CAPLUS
DOCUMENT NUMBER: 131:99250
TITLE: A stabilized reagent for measuring **alkaline phosphatase** activity.
INVENTOR(S): Kumasawa, Ichiro
PATENT ASSIGNEE(S): Nissho Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11187897	A2	19990713	JP 1997-357330	19971225

AB A method is described for improving the storage stability of p-nitrophenylphosphate soln. used as a substrate for measuring alk. phosphatase (ALP) activity in a biol. sample (e.g., blood, urine). In order to suppress the hydrolytic decompn. of p-nitrophenylphosphate upon storage, a substance possessing at least one carboxylic acid group or its salt is added to the soln. of p-nitrophenylphosphoric acid or its salt. The substrate reagent prepd. by this method for measuring ALP provides assay results excellent in reproducibility without giving any inhibitory effect on ALP reaction.

L96 ANSWER 6 OF 32 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999125970 EMBASE
TITLE: Isotachophoretic determination of phosphate splitting from Amifostine and p-nitrophenyl phosphate in serum and neuroblastoma cells.
AUTHOR: Renner S.; Klingebiel T.; Niethammer D.; Bruchelt G.; Meissner T.; Eisenbeiss F.
CORPORATE SOURCE: S. Renner, Children's Hospital, University of Tubingen, Rumelinstrasse 23, D-72070 Tubingen, Germany. chrrenn@aol.com

SOURCE: Journal of Chromatography A, (1999) 838/1-2 (251-257).
Refs: 9
ISSN: 0021-9673 CODEN: JCRAEY
PUBLISHER IDENT.: S 0021-9673(99)00084-9
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 016 Cancer
029 Clinical Biochemistry
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Amifostine [WR-2721; H2N-(CH2)3-NH-(CH2)2-S-PO3H2] is used as a protecting agent in the chemotherapy of neuroblastoma. It is supposed that Amifostine will be transformed into its active form, the free thiol (WR-1065), easier by normal cells than by tumour cells. Analytical capillary isotachophoresis was used to determine the dephosphorylation of Amifostine in serum and on neuroblastoma cells and peripheral blood cells. Furthermore, the biological effects of Amifostine and its free thiol, on cell proliferation of neuroblastoma cells were measured in combination with Carboplatin. It was found that neuroblastoma cells did not split phosphate less efficiently than normal peripheral blood cells. Furthermore, neither Amifostine (as expected) nor the free thiol (not expected according to the theory) were able to inhibit the effects of Carboplatin. Therefore, the current hypothesis concerning the mode of action of Amifostine must be questioned. Copyright (C) 1999 Elsevier Science B.V.

L96 ANSWER 7 OF 32 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1999:29238108 BIOTECHNO
TITLE: PCR-ELISA for diagnosis of mucocutaneous leishmaniasis
AUTHOR: Pinero J.; Martinez E.; Pacheco R.; Aragon Z.; De Armas F.; Del Castillo A.; Valladares B.
CORPORATE SOURCE: J. Pinero, Departamento Parasitologia, Facultad de Farmacia, Universidad de la Laguna, Avda. Astrofisico Fco. Sanchez s.n., Tenerife, Islas Canarias, Spain. E-mail: jpinero@ull.es
SOURCE: Acta Tropica, (1999), 73/1 (21-29), 16 reference(s)
CODEN: ACTRAQ ISSN: 0001-706X
PUBLISHER ITEM IDENT.: S0001706X99000157
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1999:29238108 BIOTECHNO

AB In this work we demonstrate that the PCR-ELISA technique is sufficiently sensitive and specific for use as a diagnostic test in cases of mucocutaneous leishmaniasis. DNA was extracted from cultures of Leishmania braziliensis, Leishmania infantum, Leishmania tropica, Leishmania mexicana, Trypanosoma cruzi, and **blood** samples from individuals who presented a clinical diágnosis of leishmaniasis as well as from healthy individuals. The DNA was PCR amplified and the product obtained was hybridised with a biotin-labelled probe, the sequence of which was designed in our laboratory. The result of the hybridisation was visualised by means of an ELISA technique using antifluorescein antibody labelled with alkaline phosphatase and p-nitrophenylphosphate (pNFF) as chromogen. The optical density of the products of the pNFF hydrolysis was quantified in a **spectrophotometer** at a wavelength of 405 nm. Using this technique the percentage of detection was 83.3% in **blood** samples from patients clinically diagnosed as having mucocutaneous leishmaniasis. No false positive results were obtained.

L96 ANSWER 8 OF 32 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1998-460115 [40] WPIDS
DOC. NO. CPI: C1998-139114
TITLE: Dry analysis component for **alkaline phosphatase** assay in **blood serum** - includes fine particles of amine salt of **p-nitrophenyl phosphate** or non-crystalline fine particle of amino alcohol salt.
DERWENT CLASS: B04 D16
PATENT ASSIGNEE(S): (FUJF) FUJI PHOTO FILM CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 10191997	A	19980728	(199840)*		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 10191997	A	JP 1997-17919	19970116

PRIORITY APPLN. INFO: JP 1997-17919 19970116
AN 1998-460115 [40] WPIDS
AB JP 10191997 A UPAB: 19981008
Dry analysis component for **alkaline phosphatase** assay in **blood serum** contains fine particles of amine salt of **p-nitrophenyl phosphate** or non-crystalline fine particles of amino alcohol salt in a dispersion.
ADVANTAGE - The component gives good reproducibility of analysis value by quantitative analysis of alkaline phosphate. Analysis results with high accuracy are obtained.
Dwg.0/0

L96 ANSWER 9 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1997:334949 BIOSIS
DOCUMENT NUMBER: PREV199799634152
TITLE: Evaluation of various liquid p-**nitrophenyl phosphate** (pNPP) substrates of **alkaline phosphatase**.
AUTHOR(S): Cook, N. (1); Macinnes, B. (1); Rajadhyaksha, M. (1); Kumar, V.
CORPORATE SOURCE: (1) IMMCO Diagnostics Inc., Buffalo, NY USA
SOURCE: Clinical Chemistry, (1997) Vol. 43, No. 6 PART 2, pp. S249. Meeting Info.: 49th Annual Meeting of the American Association for Clinical Chemistry Atlanta, Georgia, USA July 20-24, 1997
ISSN: 0009-9147.
DOCUMENT TYPE: Conference; Abstract; Conference
LANGUAGE: English

L96 ANSWER 10 OF 32 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1995:25337878 BIOTECHNO
TITLE: Monoclonal antibody assay for measuring bone-specific **alkaline phosphatase** activity in **serum**

Searched by Thom Larson, STIC, 308-7309

AUTHOR: Gomez Jr. B.; Ardakani S.; Ju J.; Jenkins D.; Cerelli M.J.; Daniloff G.Y.; Kung V.T.
CORPORATE SOURCE: Metra Biosystems, 265 N. Wisman Rd.,Mountain View, CA 94043-3911, United States.
SOURCE: Clinical Chemistry, (1995), 41/11 (1560-1566)
CODEN: CLCHAU ISSN: 0009-9147
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25337878 BIOTECHNO
AB Alkaline phosphatase (ALP) is present in human **serum** in the form of several isoenzymes. The two major circulating ALP isoenzymes, bone and liver, are difficult to distinguish because they are the products of a single gene and differ only by posttranslational glycosylation. Quantitative measurement of bone ALP (BAP) activity in **serum** can provide an index for the rate of bone formation. Furthermore, increased BAP activity in **serum** is indicative of bone disorders. We describe a method in which **serum** samples are added to a microtiter plate coated with monoclonal anti-BAP antibody and incubated 3 h at room temperature. After the unbound materials are washed off, the bound BAP activity is measured by adding p-nitrophenyl phosphate substrate. The assay demonstrated no cross-reactivity to intestinal or placental ALP and only 3-8% cross-reactivity to liver ALP. The intraassay (n = 21) CVs were 3.9-5.9%, and interassay (n = 8) CVs were 4.4-7.0%. Comparisons of the assay (y) with an IRMA (x) and a wheat germ agglutinin precipitation method (x') gave regression equations of y 1.32x - 6.4, r = 0.99, and y = 1.41x' + 4.8, r = 0.99. The assay detected increased BAP in **sera** from patients with osteoporosis, Paget disease, osteomalacia, or primary hyperparathyroidism.

L96 ANSWER 11 OF 32 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.DUPLICATE
ACCESSION NUMBER: 1995:25068653 BIOTECHNO
TITLE: **Spectrophotometric** determination of **alkaline phosphatase** and .alpha.-fetoprotein in human **serum** with 5,10,15,20-tetrakis (4-phosphonooxyphenyl)porphine
AUTHOR: Kawakami T.; Igarashi S.
CORPORATE SOURCE: Department of Materials Science, Faculty of Engineering, Ibaraki University,Nakanarusawa, Hitachi 316, Japan.
SOURCE: Analyst, (1995), 120/2 (539-542)
CODEN: ANALAO ISSN: 0003-2654
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25068653 BIOTECHNO
AB A highly sensitive kinetic **spectrophotometric** determination for alkaline phosphatase (ALP) using 5,10,15,20-tetrakis (4-phosphonooxyphenyl)porphine (approximately .DELTA..epsilon. .simeq. 3.0 x 10.sup.5 l mol.sup.-.sup.1 cm.sup.-.sup.1) was studied. With a measuring time of 30 min, the determination range was 2.0 x 10.sup.-.sup.1.sup.2-8.0 x 10.sup.-.sup.9 mol l.sup.-.sup.1 and the detection limit (3s) was 1.0 x 10.sup.-.sup.1.sup.2 mol l.sup.-.sup.1. The detection limit became lower on increasing the measuring time. For example, the detection limit was up to 10.sup.-.sup.1.sup.5 mol l.sup.-.sup.1 for 12 h. This method was applied to the assay of ALP in human **serum**. Using 0.50 ml of sample without any pre-treatment, a good correlation was obtained with the p-nitrophenyl phosphate method, and the relative standard deviation

was 4.7%. The method was also applied to the enzyme immunoassay of .alpha.-fetoprotein in human **serum** and provided a good correlation with the 4-methylumbelliferone derivative (r = 0.999) with approximately half the relative standard deviations (1.3-2.7%) obtained with a commercial kit. The proposed method requires very small sample volumes, is highly sensitive, highly accurate, and shows good stability of the reagent; it will be applied to various assays using ALP as a label.

L96 ANSWER 12 OF 32 MEDLINE
ACCESSION NUMBER: 92174307 MEDLINE
DOCUMENT NUMBER: 92174307 PubMed ID: 1541007
TITLE: Simultaneous determinations of liver- and bone-type alkaline phosphatase by curve-fitting of inhibition kinetic data. I. Development and evaluation of an absorbance-based method.
AUTHOR: Fitzpatrick C P; Pardue H L
CORPORATE SOURCE: Department of Chemistry, Purdue University, West Lafayette, IN 47907-1393.
CONTRACT NUMBER: GMS 13326-22,23 (NIGMS)
SOURCE: CLINICAL CHEMISTRY, (1992 Feb) 38 (2) 238-46.
Journal code: 9421549. ISSN: 0009-9147.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199204
ENTRY DATE: Entered STN: 19920424
Last Updated on STN: 19970203
Entered Medline: 19920403

AB We describe an approach for the simultaneous determination of isoenzymes of alkaline phosphatase (EC 3.1.3.1) based on the kinetic behavior of inhibition reactions. Data for absorbance vs time, collected while enzymes are being inhibited, are fitted with suitable models to obtain results related to activities of the individual isoenzymes. The primary focus is on two-component mixtures of the bone and liver isoenzymes of alkaline phosphatase, but some results are reported for three- and four-component mixtures. Factors studied include choices of inhibitors, buffers, pH, ionic strength, substrate concentration, kinetic models, data ranges, data densities, and data-processing approaches and programs. Criteria used to select optimal conditions include measurement times, detection limits, useful range, and agreement between expected and computed results for mixtures of isoenzymes. For two-component mixtures, a linear least-squares fit of isoenzyme content computed with the curve-fitting method (y) v a comparison method (x) gave y = 0.96 (+/- 0.05)x + 3.8 (+/- 3)% with r = 0.97 and standard error of the estimate of 9.4% for a range from 15 to 300 U/L. The pooled relative standard deviation (CV) for results was about 5%. Results were degraded for three- and four-component samples.

L96 ANSWER 13 OF 32 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1991-143529 [20] WPIDS
DOC. NO. NON-CPI: N1991-110372
DOC. NO. CPI: C1991-061740
TITLE: Method of discriminating human blood and animal blood - using monoclonal antibody specific to human **haemoglobin**.
DERWENT CLASS: B04 S03
PATENT ASSIGNEE(S): (ASAK) ASAHI BREWERIES LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 03078655	A	19910403	(199120)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03078655	A	JP 1989-214922	19890823

PRIORITY APPLN. INFO: JP 1989-214922 19890823
AN 1991-143529 [20] WPIDS
AB JP 03078655 A UPAB: 19930928
A method of discriminating human blood and animal blood comprises judging the origin of sample blood about blood, blood-stain or sample contg. blood by using monoclonal antibody specific to human **hemoglobin**. A reagent for discriminating human blood and animal blood comprising using monoclonal antibody to human **hemoglobin** is also claimed. The monoclonal antibody specific to human **hemoglobin** which is obtd. as follows. Antibody forming cell obtd. by immunising other animals than human being with human **hemoglobin** (antigen) is fused with myeloma cell, resulting hybridoma is cultured in a medium or transplanted into the abdominal cavity of mouse, and screening and cloning are repeated as desired, obtaining anti-human **hemoglobin** monoclonal antibody capable of binding selectively with human **hemoglobin**.

The amt. of sample blood used for the discrimination can be extremely little. The discrimination can be carried out by e.g. ELISA method in which the monoclonal antibody is bound with a sample **blood**, treated with **alkaline phosphatase**-labelled anti-mouse IgG, treated with **p-nitrophenyl phosphate**, and the absorbence of the reaction liq. is measured. By the method, human blood and blood of Japanese monkey, chimpanzee, gorilla, etc. can be discriminated.

USE/ADVANTAGE - The method and the reagent are useful for discriminating the origin of sample bood, human being or other animals, about a sample contg. blood. The discrimination of the origin of blood can be simply and accurately carried out without complex operation such as absorbing operation by utilising high specificity of the monoclonal antibody to human **hemoglobin**. @(6pp Dwg.No 0/0)@

L96 ANSWER 14 OF 32 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1989-218793 [30] WPIDS
DOC. NO. NON-CPI: N1989-166548
DOC. NO. CPI: C1989-097501
TITLE: Monitoring of elimination of gypsum on equipment surfaces - by **spectrophotometric** methods involving determn. of nitro-tri methyl phosphonic acid from change in hydrolysis rate of **nitrophenyl phosphate**.
DERWENT CLASS: E11 J04 M25 S03
INVENTOR(S): DYATLOVA, N M; TEREKHIN, S N; VOLKOVA, N A
PATENT ASSIGNEE(S): (CHRE-R) CHEM REAGENTS PRS; (MOYU) MOSCOW LOMONOSOV UNIV; (USTK-R) UST-KAMENOGORSK LEAD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

SU 1434366 A 19881030 (198930)* 2

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
SU 1434366	A	SU 1986-4121060	19860707

PRIORITY APPLN. INFO: SU 1986-4121060 19860707
AN 1989-218793 [30] WPIDS
AB SU 1434366 A UPAB: 19930923
The process involves determn. of free nitrilo-trimethyl-phosphonic acid by **spectrophotometric** means, according to the variation in the rate of reaction of the hydrolysis of para-**nitrophenyl phosphate** by **alkaline phosphatase** at pH 10-11.

The method enables the extent to which the gypsum deposits are eliminated to be quantitatively determined.

USE - In non-ferrous metals extn. and refining industries, for removing gypsum deposits from surfaces, partic. in the prodn. of zinc.
Bul.40/30.10.88
0/0

L96 ANSWER 15 OF 32 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1988-058205 [09] WPIDS
DOC. NO. NON-CPI: N1988-044224
DOC. NO. CPI: C1988-025942
TITLE: Dry analytical element for theophylline determn. - contg. increased concn. of **alkaline phosphatase** isoenzyme to reduce interferences.
DERWENT CLASS: B04 D16 S03
INVENTOR(S): FRICKEY, P H; NORTON, G E
PATENT ASSIGNEE(S): (EAST) EASTMAN KODAK CO
COUNTRY COUNT: 9
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 258035	A	19880302	(198809)*	EN	9
R: CH DE FR GB LI					
JP 63079600	A	19880409	(198820)		
US 4806470	A	19890221	(198910)		7
CA 1290662	C	19911015	(199150)		
EP 258035	B1	19920603	(199223)	EN	10
R: CH DE FR GB LI					
DE 3779519	G	19920709	(199229)		
JP 06098033	B2	19941207	(199502)		6

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 258035	A	EP 1987-307498	19870825
JP 63079600	A	JP 1987-208367	19870824
US 4806470	A	US 1986-900068	19860825
EP 258035	B1	EP 1987-307498	19870825
DE 3779519	G	DE 1987-3779519	19870803
		EP 1987-307498	19870803
JP 06098033	B2	JP 1987-208367	19870824

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 3779519	G	Based on	EP 258035
JP 06098033	B2	Based on	JP 63079600

PRIORITY APPLN. INFO: US 1986-900068 19860825
AN 1988-058205 [09] WPIDS
AB EP 258035 A UPAB: 19930923
Element comprises an absorbent carrier material, a buffer which maintains the pH at 9 or less during the detn. and, in fluid contact, first and second zones, the first zone contg. an isoenzyme of **alkaline phosphatase** which is capable of acting on a substrate for the isoenzyme at a pH of 9 or less and the second zone contg. a substrate for the isoenzyme. The isoenzyme is present in an amt. of at least 100IU/m2.
Pref. the substrate is an organic mono- or diester of phosphoric acid, esp. **p-nitrophenyl phosphate** or 4-(4-nitro-2-methylsulphonyl phenylazo)naphthol-1-phosphate. Pref. the isoenzyme is bovine liver **alkaline phosphatase**.
USE/ADVANTAGE - The element provides a simple and rapid assay for theophyline esp. in body fluids, having all of the advantages of the element in EP184,437. In addn., by increasing the amt. of **alkaline phosphatase** isoenzyme in the element, the assay exhibits less interferences from endogenous phosphatase and **haemoglobin** in the biological test fluids.
0/0
ABEQ DE 3779519 G UPAB: 19930923
Element comprises an absorbent carrier material, a buffer which maintains the pH at 9 or less during the detn. and, in fluid contact, first and second zones, the first zone contg. an isoenzyme of **alkaline phosphatase** which is capable of acting on a substrate for the isoenzyme at a pH of 9 or less and the second zone contg. a substrate for the isoenzyme. The isoenzyme is present in an amt. of at least 100IU/m2.
Pref. the substrate is an organic mono- or diester of phosphoric acid, esp. **p-nitrophenyl phosphate** or 4-(4-nitro-2-methylsulphonyl phenylazo)naphthol-1-phosphate. Pref. the isoenzyme is bovine liver **alkaline phosphatase**.
USE/ADVANTAGE - The element provides a simple and rapid assay for theophyline esp. in body fluids, having all of the advantages of the element in EP184,437. In addn., by increasing the amt. of **alkaline phosphatase** isoenzyme in the element, the assay exhibits less interferences from endogenous phosphatase and **haemoglobin** in the biological test fluids.
ABEQ EP 258035 B UPAB: 19930923
A dry analytical element for the determination of theophylline comprising an absorbent carrier material, a buffer which maintains the pH at 9 or less during the determination and, in fluid contact, first and second zones, the first zone containing an isoenzyme of **alkaline phosphatase** which is capable of acting on a substrate for the isoenzyme at a pH of 9 or less, and the second zone containing a substrate for the isoenzyme, the element characterized in that the **alkaline phosphatase** isoenzyme is present in an amount of at least about 100 I.U./m2.
ABEQ US 4806470 A UPAB: 19930923
Analytical test strip for theophylline comprises a dry absorbent carrier impregnated with a buffer agent (to maintain pH not above 9.0); having two distinct zones, one impregnated with **alkaline phosphatase** isoenzyme (at least 100 int. units/m2) and the other impregnated with a substrate for the isoenzyme, e.g. **4**-

nitrophenyl phosphate of 4-(2-methylsulphonyl -4-nitrophenyl) azonaphthyl-1-phosphate.

USE - In aq. media, the isoenzyme and organic phosphate react to give a highly coloured prod., but the enzyme is inhibited when theophylline is present in the aq. medium, with no colour formation.

L96 ANSWER 16 OF 32 MEDLINE
ACCESSION NUMBER: 88022450 MEDLINE
DOCUMENT NUMBER: 88022450 PubMed ID: 3662403
TITLE: The effect of haemolysis on the measurement of plasma alkaline phosphatase activity.
AUTHOR: Grosset A; Knapp M L; Mayne P D
CORPORATE SOURCE: Department of Chemical Pathology, Charing Cross and Westminster Medical School, Westminster Hospital, London, UK.
SOURCE: ANNALS OF CLINICAL BIOCHEMISTRY, (1987 Sep) 24 (Pt 5) 513-7.
Journal code: 0324055. ISSN: 0004-5632.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198711
ENTRY DATE: Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19871120

AB The non-dialysable fraction of haemolysate causes an apparent reduction of plasma alkaline phosphatase (ALP) activity using 4-nitrophenylphosphate as substrate. Analyses using four different buffers showed that the decrease in enzyme activity is affected by the buffer used. The percentage reduction in ALP activity is dependent on the initial ALP activity but not on the isoenzyme present. When diethanolamine was used as buffer, sample blanking almost completely compensated for the apparent reduction in enzyme activity. However, when aminomethylpropanol, aminomethylpropanediol and tris-carbonate buffers were used, it appeared that haemolysate reduced the catalytic activity of the enzyme, since sample blank correction had minimal effect on the results.

L96 ANSWER 17 OF 32 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:221645 CAPLUS
DOCUMENT NUMBER: 104:221645
TITLE: Stable **alkaline phosphatase** color test elements
INVENTOR(S): Nagashima, Minoru; Azuma, Masayuki; Noguchi, Sadao
PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61015690	A2	19860123	JP 1984-134534	19840629

AB A multilayer test element is developed for alk. phosphatase (I) detn. in clin. specimens. The element consists of (1) a support, (2) a development layer contg. dry microparticles of a I substrate that develops a color upon contact with I, (3) a hydrophilic reagent layer, and (4) optionally a protective film layer. Because of the use of dry microparticles of

substrate, the product is highly stable and can be kept at 5.degree. for >3 mo. Thus, one side of a polyethylene terephthalate film was coated successively with reagent 1 contg. gelatin, Na triisopropylnaphthalenesulfonate, and NaHCO3, reagent 2 contg. gelatin, Na triisooctylnaphthalenesulfonate, and 1,2-bis(vinylsulfonyl)ethane, a development layer compn. contg. powd. filter paper, Triton X-100, styrene-glycidyl methacrylate copolymer, MgSO4.7H2O, and p-nitrophenyl phosphate. The element was contacted with human serum and its optical d. was detd. at 410 nm.

L96 ANSWER 18 OF 32 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1986-191159 [30] WPIDS
DOC. NO. NON-CPI: N1986-142851
DOC. NO. CPI: C1986-082319
TITLE: Analytical element for theophylline determn. - by determining inhibition of alkaline phosphatase by theophylline at low pH.
DERWENT CLASS: B04 D16 J04 S03
INVENTOR(S): NORTON, G E
PATENT ASSIGNEE(S): (EAST) EASTMAN KODAK CO
COUNTRY COUNT: 10
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 188372	A	19860723	(198630)*	EN	25
R: CH DE FR GB IT LI					
JP 61170400	A	19860801	(198637)		
US 4782016	A	19881101	(198846)		
CA 1251385	A	19890321	(198916)		
EP 188372	B	19920102	(199202)		
R: CH DE FR GB IT LI					
DE 3683165	G	19920213	(199208)		
JP 06087799	B2	19941109	(199443)		8

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 188372	A	EP 1986-300226	19860115
JP 61170400	A	JP 1986-6587	19860117
US 4782016	A	US 1985-692473	19850118
JP 06087799	B2	JP 1986-6587	19860117

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 06087799	B2 Based on	JP 61170400

PRIORITY APPLN. INFO: US 1985-692473 19850118
AN 1986-191159 [30] WPIDS
AB EP 188372 A UPAB: 19930922
A dry analytical element for the determn. of theophylline in a human biological fluid comprises an absorbent carrier material (I), a buffer which maintains the pH at 9 or less during the determination and, in fluid contact, first and second zones. The first zone contains an isoenzyme of alkaline phosphatase which is capable of acting on a substrate for the isoenzyme at a pH of 9 or less and the second zone contains a substrate for the isoenzyme. Suitable substrates are organic mono- or diesters of

phosphoric acid e.g. **p-nitrophenyl phosphate** or 4-(4-nitro -2-methyl-sulphonyl phenylazo)naphthol -1-phosphate. The method can also be used in soln..

ADVANTAGE - The element provides a rapid and simple assay which avoids the effect of endogenous **alkaline phosphatase** in **serum** samples. The **alkaline phosphatase** does not have significant activity at pH 9 or less.

0/0

ABEQ EP 188372 B UPAB: 19930922

A dry analytical element for the determination of theophylline in a human biological fluid comprising an absorbent carrier material, a buffer which maintains the pH at 9 or less during the determination and, first and second zones which are in fluid contact, the element characterised in that the first zone contains a nonhuman isoenzyme of alkaline phosphatase which is capable of acting on a substrate for the isoenzyme at a pH of 9 or less, and the second zone contains a substrate for the isoenzyme.

ABEQ US 4782016 A UPAB: 19930922

Dry analytical element for theophylline determn. in human biological fluid comprises an absorbent carrier, buffer to maintain pH 9 or less and, in fluid contact, a first zone contg. isoenzyme of alkaline phosphatase which can act on a substrate for the isoenzyme at pH 9 or less and a second zone contg. substrate for the isoenzyme. The substrate may be organo mono- or di-ester of phosphoric acid and the isoenzyme may be bovine liver alkaline phosphatase.

ADVANTAGE - Simple, rapid analysis can be effected without laborious pretreatment or extn. techniques.

L96 ANSWER 19 OF 32 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 1986:16050862 BIOTECHNO
TITLE: Elevation of **alkaline phosphatase** by retinol in bovine endothelial cells and its possible relationship to lipid biosynthesis
AUTHOR: Adams S.E.; Bishop E.J.; Melnykovych G.
CORPORATE SOURCE: Department of Microbiology, University of Kansas Medical Center, Kansas City, KS 66103, United States.
SOURCE: Biochimica et Biophysica Acta - Molecular Cell Research, (1986), 885/2 (146-153)
CODEN: BAMRDP
DOCUMENT TYPE: Journal; Article
COUNTRY: Netherlands
LANGUAGE: English
AN 1986:16050862 BIOTECHNO
AB Alkaline phosphatase (EC 3.1.3.1) activity in bovine aortic endothelial cells in culture was stimulated in a synergistic manner by 10.sup.-.sup.6 M retinol and by 10.sup.-.sup.7 M dexamethasone. An early exposure to retinol was required for maximum stimulation and could be reproduced by the addition, during growth, of 2 .mu.g/ml compactin. The induced enzyme activity in cell lysates prepared from cells treated with retinol and dexamethasone had a V(max) that was 50-fold that of the controls. The stimulatory effect of retinol could be partially reversed by the addition of sonic dispersions made from cholesterol and phosphatidylcholine. The incorporation of .cents..sup.1.sup.4C!acetate into saponifiable and non-saponifiable cellular lipids was inhibited by 10.sup.-.sup.6 M retinol but the activities of 3-hydroxy-3-methylglutaryl coenzyme A reductase (EC 1.1.1.34) and 3-hydroxy-3-methylglutaryl coenzyme A synthase (EC 4.1.3.5) remained unaffected. The results suggest that retinol might inhibit lipid biosynthesis through an alternate mechanism.

L96 ANSWER 20 OF 32 MEDLINE
ACCESSION NUMBER: 83180697 MEDLINE

DOCUMENT NUMBER: 83180697 PubMed ID: 6404566
TITLE: A reference method for measurement of alkaline phosphatase activity in human serum.
AUTHOR: Tietz N W; Burtis C A; Duncan P; Ervin K; Petitclerc C J; Rinker A D; Shuey D; Zygowicz E R
SOURCE: CLINICAL CHEMISTRY, (1983 May) 29 (5) 751-61.
Journal code: 9421549. ISSN: 0009-9147.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198306
ENTRY DATE: Entered STN: 19900318
Last Updated on STN: 19900318
Entered Medline: 19830610

AB We present an official AACC reference method for the measurement of alkaline phosphatase, the culmination of optimization experiments conducted by a group of independent laboratories. The details of this method and evaluation of factors affecting the measurement are described. A metal ion buffer has been incorporated that maintains optimal and constant concentrations of zinc(II) and magnesium(II) ions. Final reaction conditions are: pH (30 degrees C), 10.40 +/- 0.05; 2-amino-2-methyl-1-propanol buffer, 0.35 mol/L; **4-nitrophenyl phosphate**, 16.0 mmol/L; magnesium acetate, 2.0 mmol/L; zinc sulfate, 1.0 mmol/L; and N-(2-hydroxyethyl)ethylenediaminetriacetic acid, 2.0 mmol/L.

L96 ANSWER 21 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
ACCESSION NUMBER: 1983:70660 BIOSIS
DOCUMENT NUMBER: BR24:70660
TITLE: L PHENYL ALANINE INHIBITION OF HUMAN **ALKALINE PHOSPHATASES** EC-3.1.3.1 WITH P **NITROPHENYL PHOSPHATE** AS SUBSTRATE.
AUTHOR(S): KOMODA T; HOKARI S; SONODA M; SAKAGISHI Y; TAMURA T
CORPORATE SOURCE: DEP. BIOCHEM., SAITAMA MED. SCH., 38 MOROYAMA, IRUMA-GUN, SAITAMA 350-04, JPN.
SOURCE: Clin. Chem. (Winston-Salem, N. C.), (1982) 28 (12), 2426-2428.
CODEN: CLCHAU. ISSN: 0009-9147.
FILE SEGMENT: BR; OLD
LANGUAGE: English

L96 ANSWER 22 OF 32 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 82127132 EMBASE
DOCUMENT NUMBER: 1982127132
TITLE: Reactivity and stability of microencapsulated placental **alkaline phosphatase**.
AUTHOR: Takenaka H.; Kawashima Y.; Chikamatsu Y.; Ando Y.
CORPORATE SOURCE: Gifu Coll. Pharm., Mitahora, Gifu, 502, Japan
SOURCE: Chemical and Pharmaceutical Bulletin, (1982) 30/2 (695-701).
CODEN: CPBTAL
COUNTRY: Japan
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: English

L96 ANSWER 23 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1983:194316 BIOSIS

DOCUMENT NUMBER: BA75:44316
TITLE: KINETIC STUDIES OF THE TRANS PHOSPHORYLATION REACTIONS CATALYZED BY **ALKALINE PHOSPHATASE** FROM ESCHERICHIA-COLI HYDROLYSIS OF P **NITROPHENYL PHOSPHATE** AND O CARBOXYPHENYL PHOSPHATE IN PRESENCE OF TRIS HYDROXYMETHYLAMINO METHANE.
AUTHOR(S): ROIG M G; BURGUILLO F J; DEL ARCO A; USERO J L; IZQUIERDO C; HERRAEZ M A
CORPORATE SOURCE: DEP. QUIM. FISICA, FAC. QUIM., UNIV. SALAMANCA, SALAMANCA, SPAIN.
SOURCE: INT J BIOCHEM, (1982) 14 (7), 655-666.
CODEN: IJBOBV. ISSN: 0020-711X.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB Transphosphorylation of p-nitrophenyl phosphate and o-carboxyphenyl phosphate to Tris by E. coli alkaline phosphatase was studied at alkaline and acid pH. The rate of release for all reaction products was Tris-dependent for both substrates, with a slight maximum for phenol at alkaline pH. These dependencies were analyzed from a mechanistic standpoint. Individual constants of rate of a simple transphosphorylation mechanism were determined. At high Tris concentrations (> 1.0 M) a slight competitive inhibition was observed. Inhibition in NH4+-NH3Cl buffer was found at alkaline pH but not at acid pH. The nonprotonated NH2 group of Tris is probably responsible for inhibition. Complexes are apparently formed between Tris and the enzyme. Other possible alternatives are also analyzed.

L96 ANSWER 24 OF 32 MEDLINE
ACCESSION NUMBER: 81210644 MEDLINE
DOCUMENT NUMBER: 81210644 PubMed ID: 7237780
TITLE: Response-surface-optimized, zinc-enhanced assay for serum alkaline phosphatase.
AUTHOR: Thompson J C; Hodges C T; Dobler G L; Williamson J A Jr
SOURCE: CLINICAL CHEMISTRY, (1981 Jul) 27 (7) 1171-5.
Journal code: 9421549. ISSN: 0009-9147.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198108
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19810827

AB An optimized assay for alkaline phosphatase (EC 3.1.3.1) is reported. A discrete analyzer, the DuPont Automatic Clinical Analyzer (aca), was used for this study. The assay is based on results of response-surface experimental co-optimization techniques, and response is enhanced over the present aca assay. A key feature is the incorporation of zinc ions, both to fully optimize the assay and to reduce the sensitivity of measured activity to zinc-binding impurities in the buffer, 2-amino-2-methyl-1-propanol. In addition, a simple technique is described for measuring relative concentrations of zinc-binding impurities in this buffer. These features should be considered in the design of any assay for alkaline phosphatase that is based on **p-nitrophenyl phosphate** as substrate and 2-amino-2-methyl-1-propanol as buffer.

L96 ANSWER 25 OF 32 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 81088720 MEDLINE
DOCUMENT NUMBER: 81088720 PubMed ID: 7449094
TITLE: **4-nitrophenyl phosphate**

--characterization of high-purity materials for measuring alkaline phosphatase activity in human serum.
AUTHOR: Bowers G N Jr; McComb R B; Upretti A
SOURCE: CLINICAL CHEMISTRY, (1981 Jan) 27 (1) 135-43.
Journal code: 9421549. ISSN: 0009-9147.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198103
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19900316
Entered Medline: 19810324

AB We studied 53 lots of **4-nitrophenyl phosphate** (I), obtained from 20 different commercial suppliers, and used this information to set specifications for it. Using these well-defined specifications, we classified 21 lots of I as "unacceptable," 26 lots as "borderline," and six as "acceptable." All lots were shown to contain some 4-nitrophenol and inorganic phosphate. However, "acceptable" I had < 0.3 mmol of 4-nitrophenol and < 10 mmol of inorganic phosphate per mole of I. The mole concentration of I (based on disodium hexahydrate, formula weight 371) was determined by enzymic conversion to 4-nitrophenol in five lots of "acceptable" materials. The mole fraction of I ranged from 0.982 to 0.998. From these measurements and from estimates of impurities that absorb at 311 nm, as determined by liquid chromatography and spectrophotometry at other wavelengths, our best estimate of the molar absorptivity of I at 311 nm in 10 mmol/L NaOH at 25 degrees C was 9867 L x mol-1 x cm-1, with a total uncertainty of 76 L x mol-1 x cm-1. We recommend that I used in clinical laboratories for measurement of alkaline phosphatase activity in serum meet the specifications given in this paper: I content > 98%, maximum activity > 98% in comparative testing with other "acceptable" lots of I, and impurities not to exceed the values cited above.

L96 ANSWER 26 OF 32 BIOTECHNO COPYRIGHT 2002 Elsevier Science B.V.
ACCESSION NUMBER: 1981:11188992 BIOTECHNO
TITLE: 4-**Nitrophenyl phosphate** -characterization of high-purity materials for measuring **alkaline phosphatase** activity in human serum
AUTHOR: Bowers Jr. G.N.; McComb R.B.; Upretti A.
CORPORATE SOURCE: Clin. Chem. Lab., Dept. Pathol., Hartford Hosp., Hartford, Conn. 06115, United States.
SOURCE: Clinical Chemistry, (1981), 27/1 (135-143)
CODEN: CLCHAU
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
AN 1981:11188992 BIOTECHNO
AB We studied 53 lots of 4-nitrophenyl phosphate (I), obtained from 20 different commercial suppliers, and used this information to set specifications for it. Using these well-defined specifications, we classified 21 lots of I as 'unacceptable,' 26 lots as 'borderline,' and six as 'acceptable.' All lots were shown to contain some 4-nitrophenol and inorganic phosphate. However, 'acceptable' I had <0.3 mmol of 4-nitrophenol and <10 mmol of inorganic phosphate per mole of I. The mole concentration of I (based on disodium hexahydrate, formula weight 371) was determined by enzymic conversion to 4-nitrophenol in five lots of 'acceptable' materials. The mole fraction of I ranged from 0.982 to 0.998. From these measurements and from estimates of impurities that absorb at 311 nm, as determined by liquid chromatography and

spectrophotometry at other wavelengths, our best estimate of the molar absorptivity of I at 311 nm in 10 mmol/L NaOH at 25.degree.C was 9867 L.mol.sup.-.sup.1.cm.sup.-.sup.1, with a total uncertainty of 76 L.mol.sup.-.sup.1.cm.sup.-.sup.1. We recommend that I used in clinical laboratories for measurement of alkaline phosphatase activity in serum meet the specifications given in this paper: I content >98%, maximum activity >98% in comparative testing with other 'acceptable' lots of I, and impurities not to exceed the values cited above.

L96 ANSWER 27 OF 32 MEDLINE
ACCESSION NUMBER: 80104108 MEDLINE
DOCUMENT NUMBER: 80104108 PubMed ID: 118558
TITLE: An enzyme linked immunosorbent assay (ELISA) for detecting IgG sensitized erythrocytes.
AUTHOR: Bruner K W Jr; Kissling C W
SOURCE: TRANSFUSION, (1979 Nov-Dec) 19 (6) 773-7.
Journal code: 0417360. ISSN: 0041-1132.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198003
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19800317

AB This paper describes an Enzyme Linked Immunosorbent Assay (ELISA) for detecting IgG sensitized erythrocytes utilizing a commercially available anti-human IgG conjugated with alkaline phosphatase. Erythrocyte hemolysis in the assay was minimized by dissolving the **p-nitrophenyl phosphate** substrate in a carbonate-bicarbonate buffer. Nonspecific absorption of the enzyme conjugate to erythrocytes and glassware was reduced by adding 1% bovine serum albumin to wash solutions. Assay sensitivity was increased with greater concentrations of enzyme conjugate and erythrocytes in the incubation stage. The sensitivity of the described ELISA procedure is approximately equal to that of the standard antiglobulin test. Some possible future applications of ELISA in the blood bank are discussed.

L96 ANSWER 28 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1978:195541 BIOSIS
DOCUMENT NUMBER: BA66:8038
TITLE: 4 NITRO PHENOL IN 4 **NITROPHENYL PHOSPHATE** A SUBSTRATE FOR **ALKALINE PHOSPHATASE** AS MEASURED BY PAIRED ION HIGH PERFORMANCE LIQUID CHROMATOGRAPHY.
AUTHOR(S): CULBRETH P H; DUNCAN I W; BURTIS C A
CORPORATE SOURCE: BUR. LAB., CENT. DIS. CONTROL, PUBLIC HEALTH SERV., ATLANTA, GA. 30333, USA.
SOURCE: CLIN CHEM, (1977) 23 (12), 2288-2291.
CODEN: CLCHAU. ISSN: 0009-9147.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB Paired-ion high-performance liquid chromatography was used to determine the 4-nitrophenol content of 4-nitrophenyl phosphate, a substrate for alkaline phosphatase analysis. This was done on a reversed-phase column with a mobile phase of methanol/water, 45/55 by vol, containing 3 ml of tetrabutylammonium phosphate reagent per 200 ml of solvent. At a flow rate of 1 ml/min, 4-nitrophenol was eluted at 9 min and monitored at 404 nm; 4-nitrophenyl phosphate was eluted at 5 min and could be monitored at 311 nm. Samples of 4-nitrophenyl phosphate obtained from several sources

contained 0.3-7.8 mol of 4-nitrophenol per mol of 4-nitrophenyl phosphate.

L96 ANSWER 29 OF 32 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1978:144420 BIOSIS
DOCUMENT NUMBER: BA65:31420
TITLE: TEMPERATURE DEPENDENCE OF THE ABSORBANCE OF ALKALINE SOLUTIONS OF 4 **NITROPHENYL PHOSPHATE** A POTENTIAL SOURCE OF ERROR IN THE MEASUREMENT OF **ALKALINE PHOSPHATASE** ACTIVITY.
AUTHOR(S): BURTIS C A; SEIBERT L E; BAIRD M A; SAMPSON E J
CORPORATE SOURCE: BUR. LAB., CENT. DIS. CONTROL, ATLANTA, GA. 30333, USA.
SOURCE: CLIN CHEM, (1977) 23 (9), 1541-1547.
CODEN: CLCHAU. ISSN: 0009-9147.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB The absorbance of an alkaline solution of 4-nitrophenyl phosphate was a function of temperature. Quantitative evaluation of this phenomenon indicated that it depended on the concentration of the compound and was independent of source, buffer concentration and pH above 9.0; was reversible; was not a result of alkaline hydrolysis or 4-nitrophenol contamination; and correlated with a temperature-induced shift of its absorbance spectrum. The phenomenon may represent a potential analytical problem in methods for alkaline phosphatase in which this compound was the substrate. If thermal equilibrium was not reached and maintained during an alkaline phosphatase assay, the thermochromic response would be included in the measured rate. The magnitude of this error depended on the thermal response and control characteristics of each particular instrument and the reaction conditions under which such an analysis was performed.

L96 ANSWER 30 OF 32 MEDLINE
ACCESSION NUMBER: 75218962 MEDLINE
DOCUMENT NUMBER: 75218962 PubMed ID: 1153923
TITLE: A continuous-flow method for the determination of the activity of serum alkaline phosphatase in diethanolamine buffer.
AUTHOR: Viitala A J; Jokela H A; Penttila I M; Nummi S
SOURCE: SCANDINAVIAN JOURNAL OF CLINICAL AND LABORATORY INVESTIGATION, (1975 May) 35 (3) 267-73.
Journal code: 0404375. ISSN: 0036-5513.
PUB. COUNTRY: Norway
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197511
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19751108
AB A procedure for determination of serum alkaline phosphatase activity (EC 3.1.3.1) in diethanolamine (DEA) buffer with an AutoAnalyzer II apparatus was designed. The buffer used was 1.0 mol/l DEA-HC buffer, pH 9.8 at 37 degree C, containing 0.5 mmol/l of MgCl2 and 10 mmol/l of substrate **4-nitrophenyl-phosphate**. The reaction time was about 3 min at 37 degree C. The enzyme activity (U/l) was calculated by determining the amount of 4-nitrophenol formed in reaction. A sampling rate of 70 samples per hour can be used with good linearity up to 1000 U/l. The results obtained by the new continuous-flow system were compared with those measured by the kinetic method according to the Scandinavian recommendation (10). A close correlation between the two methods was observed.

L96 ANSWER 31 OF 32 MEDLINE
ACCESSION NUMBER: 75050823 MEDLINE
DOCUMENT NUMBER: 75050823 PubMed ID: 4428830
TITLE: [Hydrolysis of arylphosphatates by multiple forms of alkaline phosphatase. Studies on human alkaline phosphatases, II (author's transl)].
Hydrolyse von Arylphosphaten durch multiple Formen alkalischer Phosphatasen. Untersuchungen uber alkalische Phosphatasen menschlicher Geweve, II.
AUTHOR: Lorentz K; Flatter B; Voss J; Heydrich D
SOURCE: ZEITSCHRIFT FUR KLINISCHE CHEMIE UND KLINISCHE BIOCHEMIE, (1974 Feb) 12 (2) 87-91.
Journal code: 7607250. ISSN: 0044-2933.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197502
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19750201

L96 ANSWER 32 OF 32 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1973-28960U [21] WPIDS
TITLE: Alkaline phosphatase determination - using **4-nitrophenyl phosphate** as substrate and diethanolamine organic salts as buffer.
DERWENT CLASS: B04 S03 S05
PATENT ASSIGNEE(S): (HAUR) HAURY CHEMISCHE FAB H
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2154993	A		(197321)*		

PRIORITY APPLN. INFO: DE 1971-2154993 19711105
AN 1973-28960U [21] WPIDS
AB DE 2154993 A UPAB: 19930831
In the determination of **alkaline phosphatase** in body fluids (esp. **serum**) using **p-nitrophenyl phosphate** (I) as substrate, the p-nitrophenol released by the enzymatic reaction being determined photometrically, an organic salt of diethanolamine (pref. the formate or glutarate) is used instead of diethanolamine hydrochloride as buffer substance. This gives increased turnover of substrate and increases the sensitivity of the determination. Since solutions of (I) are unstable, it is advantageous to prepare a lyophilisate of (I) together with a protective substance which does not interfere with the enzymatic reaction (pref. glucose) and to add the lyophilisate to the buffer soln. immediately before carrying out the determination.